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PATENT

Paper No.

File: Concir-2

Date: August 7, 2002

Signed:

Peter K. Trzyna (Reg. No. 32,601)



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventors : Brian J. McDermott, Jr., Daniel McGowan, Ralph Leo Spotts, and Sid Tryzbiak

Serial No. : 09/694,099

Filed : October 10, 2000

For : IMPROVED CIRCUIT BOARD OR OTHER MULTILAYER ELECTRICAL DEVICE MADE BY FORMING TEETH TO JOIN LAYERS

Group Art Unit : 2827

Examiner : Dinh, Tuan T

Honorable Commissioner of Patents
and Trademarks
Washington, D.C. 20231

**RESPONSE TO NOTICE OF
NON-COMPLIANT AMENDMENT (37 C.F.R. 1.121)**

S I R :

The amendment filed on July 1, 2002, was considered non-compliant because a marked-up version of the replacement abstract was not filed.

In response to the Notice of Non-Complaint Amendment, enclosed is the Amended Version of the Abstract in the above-identified application.

The Commissioner is hereby authorized to charge any fees associated with the above-identified patent application or credit any overcharges to Deposit Account No. 50-0235.

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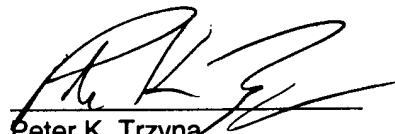
11 / Resp.
8/28/2
Sunder

Please direct all correspondence to the undersigned at the address given below.

Respectfully submitted,

Date: August 7, 2002

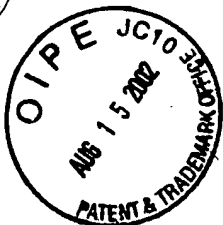
P.O. Box 7131
Chicago, IL 60680-7131
(312) 240-0824


Peter K. Trzyna
(Reg. No. 32,601)



UNITED STATES PATENT AND TRADEMARK OFFICE

UNDER SECRETARY OF COMMERCE FOR INTELLECTUAL PROPERTY AND
DIRECTOR OF THE UNITED STATES PATENT AND TRADEMARK OFFICE
WASHINGTON, DC 20231
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Paper No.

Notice of Non-Compliant Amendment (37 CFR 1.121)

The amendment filed on 7/1/02 is considered non-compliant because it has failed to meet the requirements of 37 CFR 1.121, as amended on September 8, 2000 (see 65 Fed. Reg. 54603, Sept. 8, 2000, and 1238 O.G. 77, Sept. 19, 2000). In order for the amendment to be compliant, applicant must supply the following omissions or corrections in response to this notice.

THE FOLLOWING ITEMS ARE REQUIRED FOR COMPLIANCE WITH RULE 1.121 (APPLICANT NEED NOT RE-SUBMIT THE ENTIRE AMENDMENT):

- ☐ 1. A clean version of the replacement paragraph(s)/section(s) is required. See 37 CFR 1.121(b)(1)(ii).
- ☒ 2. A marked-up version of the replacement paragraph(s)/section(s) is required. See 37 CFR 1.121(b)(1)(iii).
- ☐ 3. A clean version of the amended claim(s) is required. See 37 CFR 1.121(c)(1)(i).
- ☐ 4. A marked-up version of the amended claim(s) is required. See 37 CFR 1.121(c)(1)(ii).

Explanation: Abstract

(LIE: Please provide specific details for correction to assist the applicant. For example, "the clean version of claim 6 is missing.")

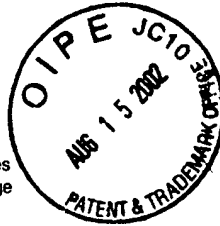
For further explanation of the amendment format required by 37 CFR 1.121, see MPEP § 714 and the USPTO website at <http://www.uspto.gov/web/offices/dcom/olia/pbg/sampleaf.pdf>. A condensed version of a sample amendment format is attached.

- ☐ **PRELIMINARY AMENDMENT:** Unless applicant supplies the omission or correction to the preliminary amendment in compliance with revised 37 CFR 1.121 noted above within ONE MONTH of the mail date of this letter, examination on the merits may commence without entry of the originally proposed preliminary amendment. This notice is not an action under 35 U.S.C. 132, and this ONE MONTH time limit is not extendable.
- ☒ **AMENDMENT AFTER NON-FINAL ACTION:** Since the above-mentioned reply appears to be *bona fide*, applicant is given a TIME PERIOD of ONE MONTH or THIRTY DAYS from the mailing of this notice, whichever is longer, within which to supply the omission or correction noted above in order to avoid abandonment. EXTENSIONS OF THIS TIME PERIOD MAY BE GRANTED UNDER 37 CFR 1.136(a).

msi.mccullon
Legal Instruments Examiner (LIE)

703) 308-5848
(Rev. 12/01)

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Date: August 7, 2002

By: [Signature]
(Signature of person mailing paper or fee)

PATENT

Paper No. 4

File: Concir-2

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventors : Brian J. McDermott, Jr., Daniel McGowan,
Ralph Leo Spotts, and Sid Tryzbiak

Serial No. : 09/694,099

Filed : 20 October 2000

For : IMPROVED CIRCUIT BOARD OR OTHER MULTILAYER
ELECTRICAL DEVICE MADE BY FORMING TEETH TO
JOIN LAYERS

Group Art Unit : 2827

Examiner : TUAN, Dinh T.

The Commissioner of Patents
and Trademarks
Washington, D.C. 20231

AMENDED VERSION OF THE ABSTRACT

SIR:

Set forth below is the amended version of the abstract.

A multilayer electrical device, such as a printed circuit board, [and method for making the electrical device] having a tooth structure [joining at least one of the layers. The method includes the following steps: providing a base; preparing the base and adding a conductive layer to the base; applying a dielectric material to the conductive layer; preparing the applied dielectric material for receipt of the conductive coating; forming openings (vias) through holes in the applied dielectric coating; etching cavities in the applied dielectric material; applying a conductive coating to the cavities in the applied dielectric material; and forming a metal layer

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on the conductive coating to produce a tooth structure set in the dielectric coating. The tooth structure preferably has obtuse teeth in the range of 1-2 tenths of a mil deep that mechanically join a dielectric material to a subsequently added metal layer.] including a metal layer set in a dielectric. The device includes a base; a conductive layer adjacent to the base; a dielectric material adjacent to conductive layer; a tooth structure including a metal layer set in the dielectric material to join the dielectric material to the metal layer; and wherein the metal layer forms a portion of circuitry in a circuit board having multiple layers of circuitry.

If the prosecution of this case can be in any way advanced by a telephone discussion, the Examiner is requested to call the undersigned at (312) 240-0824. The Commissioner is hereby authorized to charge any fees associated with the above-identified patent application or credit any overcharges to Deposit Account No. 50-0235.

Please direct all correspondence to the undersigned at the address given below.

Respectfully submitted,

Date: August 7, 2022


Peter K. Trzyna
(Reg. No. 32,601)

P.O. Box 7131
Chicago, IL 60680-7131

(312) 240-0824